IN THE CLAIMS

Please amend claims 15, 21, 28, 51–54 and 57-60.

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. – 14. (Canceled)

15. (Currently amended) A method of binding an isolated or recombinant DmGPCR with a DmGPCR binding partner comprising the steps of: contacting a composition comprising a DmGPCR with a DmGPCR binding partner; and allowing said DmGPCR binding partner to bind said DmGPCR wherein said DmGPCR is ~~an amino cid sequence encoded by~~ DmGPCR7 (SEQ ID NO: ~~17~~ 18) and wherein said DmGPCR binding partner is a leucokinin (LK).

16. – 20. (Canceled)

21. (Currently amended) The method according to claim 15, ~~20,~~ wherein said leucokinin has a sequence with at least 80% sequence identity to a sequence selected from the group consisting of LK-I (SEQ ID NO: 175), LK-V (SEQ ID NO: 176), LK-VI (SEQ ID NO: 177), and LK-VIII (SEQ ID NO: 178), Culekinin (SEQ ID NO: 179), LY7MMaea lymnolçinin (SEQ ID NO: 180), DLK-1 (SEQ ID NO : 181), DLK-2 (SEQ ID NO: 182), and DLK-2a (SEQ ID NO: 183).

22. – 27. (Canceled)

28. (Currently amended) A method for identifying a modulator of binding and/or function between a DmGPCR and a DmGPCR binding partner, comprising the steps of : contacting a DmGPCR binding partner and a composition comprising a DmGPCR in the presence or in the absence of a putative modulator compound; detecting binding between the DmGPCR binding partner and the DmGPCR ; and determining whether binding in the

presence of said putative modulator compound is increased or decreased compared to binding in the absence of said putative modulator compound, determining whether function in the presence of said putative modulator compound is increased or decreased compared to function in the absence of said putative modulator compound, wherein said DmGPCR is ~~an amino cid sequence encoded by~~ DmGPCR7 (SEQ ID NO: ~~17~~ 18).

29. (Original) The method according to claim 28, wherein said DmGPCR binding partner is a leucokinin.

30. (Original) The method according to claim 29, wherein said leucokinin has a sequence with at least 80% sequence identity to a sequence selected from the group consisting of LK-I (SEQ ID NO: 175), LK-V (SEQ ID NO: 176), LK-VI (SEQ ID NO: 177), LK-VIII (SEQ ID NO: 178), Culekinin (SEQ ID NO: 179), Ly7linaca lynmokinin (SEQ ID NO: 180), DLK-1 (SEQ ID NO: 181), DLK-2 (SEQ ID NO: 182), and DLK-2a (SEQ ID NO: 183).

31. – 50. (Canceled)

51. (Currently amended) The method of claim 28 wherein ~~said DmGPCR and said~~ DmGPCR binding partner ~~are selected from the group consisting of: DmGPCR7 and~~ is a leucokinin that has a sequence with at least 90% sequence identity to a sequence selected from the group consisting of LK-I (SEQ ID NO:175), LK-V (SEQ ID NO:176), LK-VI (SEQ ID NO:177), LK-VIII (SEQ ID NO:178), Culekinin (SEQ ID NO:179), Ly7linaca lynmokinin (SEQ ID NO:180), DLK-1 (SEQ ID NO:181), DLK-2 (SEQ ID NO:182), and DLK-2a (SEQ ID NO:183.

52. (Currently amended) The method of claim 28 wherein ~~said DmGPCR and~~ said DmGPCR binding partner ~~are selected from the group consisting of: DmGPCR7 and~~ is a leucokinin that has a sequence with at least 95% sequence identity to a sequence selected from the group consisting of LK-I (SEQ ID NO:175), LK-V (SEQ ID NO:176), LK-VI (SEQ ID NO:177), LK-VIII (SEQ ID NO:178), Culekinin (SEQ ID NO:179), Ly7linaca

lynmokinin (SEQ ID NO:180), DLK-1 (SEQ ID NO:181), DLK-2 (SEQ ID NO:182), and DLK-2a (SEQ ID NO:183).

53. (Currently amended) The method of claim 28 wherein ~~said DmGPCR and~~ said DmGPCR binding partner ~~are selected from the group consisting of: DmGPCR7 and~~ is a leucokinin that has a sequence with at least 99% sequence identity to a sequence selected from the group consisting of LK-I (SEQ ID NO:175), LK-V (SEQ ID NO:176), LK-VI (SEQ ID NO:177), LK-VIII (SEQ ID NO: 178), Culekinin (SEQ ID NO:179), Ly7linaca lynmokinin (SEQ ID NO:180), DLK-1 (SEQ ID NO:181), DLK-2 (SEQ ID NO:182), and DLK-2a (SEQ ID NO:183.

54. (Currently amended) The method of claim 28 wherein ~~said DmGPCR and~~ said DmGPCR binding partner ~~are DmGPCR7 and~~ is a leucokinin that has a sequence selected from the group consisting of LK-I (SEQ ID NO:175), LK-V (SEQ ID NO:176), LK-VI (SEQ ID NO:177), LK-VIII (SEQ ID NO:178), Culekinin (SEQ ID NO:179), Ly7linaca lynmokinin (SEQ ID NO:180), DLK-1 (SEQ ID NO:181), DLK-2 (SEQ ID NO:182), and DLK-2a (SEQ ID NO:183).

55. – 56. (Canceled)

57. (Currently amended) The method according to claim 15, wherein ~~said DmGPCR and~~ said DmGPCR binding partner is ~~selected from the group consisting of: DmGPCR7 and~~ a leucokinin that has a sequence with at least 90% sequence identity to a sequence selected from the group consisting of LK-I (SEQ ID NO:175), LK-V (SEQ ID NO:176), LK-VI (SEQ ID NO:177), LK-VIII (SEQ ID NO:178), Culekinin (SEQ ID NO:179), Ly7linaca lynmokinin (SEQ ID NO:180), DLK-1 (SEQ ID NO:181), DLK-2 (SEQ ID NO:182), and DLK-2a (SEQ ID NO:183).

58. (Currently amended) The method according to claim 15, wherein ~~said DmGPCR and~~ said DmGPCR binding partner is ~~selected from the group consisting of: DmGPCR7 and~~ a leucokinin that has a sequence with at least 95% sequence identity to a sequence selected from the group consisting of LK-I (SEQ ID NO:175), LK-V (SEQ ID NO:176), LK-VI (SEQ ID NO:177), LK-VIII (SEQ ID NO:178), Culekinin (SEQ ID NO:179), Ly7linaea lynmokinin (SEQ ID NO:180), DLK-1 (SEQ ID NO:181), DLK-2 (SEQ ID NO:182), and DLK-2a (SEQ ID NO:183).

59. (Currently amended) The method according to claim 15, wherein ~~said DmGPCR and~~ said DmGPCR binding partner is ~~selected from the group consisting of: DmGPCR7 and~~ a leucokinin that has a sequence with at least 99% sequence identity to a sequence selected from the group consisting of LK-I (SEQ ID NO:175), LK-V (SEQ ID NO:176), LK-VI (SEQ ID NO:177), LK-VIII (SEQ ID NO:178), Culekinin (SEQ ID NO:179), Ly7linaea lynmokinin (SEQ ID NO:180), DLK-1 (SEQ ID NO:181), DLK-2 (SEQ ID NO:182), and DLK-2a (SEQ ID NO:183).

60. (Currently amended) The method according to claim 15, wherein ~~said DmGPCR and~~ said DmGPCR binding partner is ~~DmGPCR7 and~~ a leucokinin that has a sequence selected from the group consisting of LK-I (SEQ ID NO:175), LK-V (SEQ ID NO:176), LK-VI (SEQ ID NO:177), LK-VIII (SEQ ID NO:178), Culekinin (SEQ ID NO:179), Ly7linaea lynmokinin (SEQ ID NO:180), DLK-1 (SEQ ID NO:181), DLK-2 (SEQ ID NO:182), and DLK-2a (SEQ ID NO:183).